Virtual Beach Manager Toolset

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The Virtual Beach Manager Toolset (VB) is a set of decision support software tools developed to help local beach managers make decisions as to when beaches should be closed due to predicted high levels of water borne pathogens. The tools are being developed under the umbrella of EPA's Advanced Monitoring Initiative (AMI) and in support of the Beaches Environmental Assessment and Coastal Health (BEACH) Act. AMI is an EPA initiative that advances the goals of integrating science and environmental data into decision support tools useful to policy makers and individuals. Virtual Beach is comprised of two components. The first is a data exploration/model builder tool that facilitates the development of a multiple linear regression (MLR) equation for predicting pathogen concentrations for a specific beach based on environmental data such as wave height and water temperature. The second component is a Beach Manger tool that is deployed for use by local beach officials. It houses the MLR developed with the model builder, automatically pulls in distributed data for the current day, and makes a prediction to aid local officials in deciding whether a beach should be closed for a particular day. VB should benefit the beach going public by keeping the beaches open on more days when they are safe, and protecting them more frequently when water quality drops below acceptable levels. The testing and deployment of VB has been a collaboration between the Office of Water, Region 5 and several Great Lake States and organizations. (Although this work was reviewed by EPA and approved for publication, it may not necessarily reflect official Agency policy. Mention of trade names or commercial products does not constitute endorsement or recommendation for use.)

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